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Substitute for Form 1449A/PTO

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

**Complete if Known**

<b>Application Number</b>	09/876,549
<b>Filing Date</b>	June 7, 2001
<b>First Named Inventor</b>	John SantaLucia, Jr.
<b>Group Art Unit</b>	1645
<b>Examiner Name</b>	
<b>Attorney Docket Number</b>	WSU 0192 PUSP

Sheet	1	of	1
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## U.S. PATENT DOCUMENTS

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## FOREIGN PATENT DOCUMENTS

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**Examiner  
Signature**

Date  
Considered

Considered	12/1/05
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<sup>1</sup> Unique citation designation number. <sup>2</sup> See attached Kinds of U.S. Patent Documents. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.



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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				Application Number	09/876,549
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				First Named Inventor	John SantaLucia, et al.
				Group Art Unit	
				Examiner Name	
Sheet	1	of	4	Attorney Docket Number	WSU 0192 PUS
<b>OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS</b>					
Examiner Initials *	Cite No. †	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			
AK		ALLAWI, H.T., ET AL., Thermodynamics and NMR of Internal G-T Mismatches in DNA, Biochemistry, 36, 1997, pgs. 10581-10594.			
AK		ALLAWI, H.T., ET AL., Nearest-Neighbor Thermodynamic Parameters For Internal GA Mismatches in DNA, Biochemistry, 37, 1998, Pgs. 2170-2179.			
AK		ALLAWI, H.T., ET AL., Nearest-Neighbor Thermodynamics of Internal AC Mismatches in DNA: Sequence Dependence and pH Effect, Biochemistry, 37, 1998, pgs. 9435-9444.			
AK		ALLAWI, H.T., ET AL. Thermodynamics of Internal CT Mismatches in DNA, Nucleic Acids Res., 26, 1998, Pgs. 2694-2701.			
AK		ANATO, ET AL., Thermodynamic Parameters for Loop Formation in RNA and DNA hairpin tetraloops, Nucleic Acids Res. 20, 1991, pgs. 819-824.			
AK		BASHIR, M.S., ET AL., In Situ Hybridization For The Identification of Helicobacter Pylori In Paraffin Wax Embedded Tissue, J. clin. Pathol., 9, 1994, pgs. 862-864.			
AK		BLAKE, ET AL., Statistical mechanical simulation of polymeric DNA melting with MELTSIM, Bioinformatics, 15, No. 5, 1999, pgs. 370-375.			
AK		BLOMMERS, ET AL., Effects of Base Sequence on the Loop Folding in DNA Hairpins, Biochemistry 28, 1989, pgs. 7491-7498.			
AK		BOMMARITO, S., ET AL., Thermodynamic Parameters For DNA Sequences With Dangling Ends, Nucleic Acids Res., 28, 2000, pgs. 1929-1934.			
AK		BRESLAUER, K.J., ET AL. Predicting DNA Duplex Stability from the Base Sequence. Proc. Natl. Acad. Sci. U.S.A., 83, 1986, pgs. 3746-3750.			
AK		CHEN, H. and Zhu G. Computer Program For Calculating The Melting Temperature Of Degenerate Oligonucleotides Used In PCR Or Hybridization. BioTechniques, 22, 1997, pgs. 1158-1160.			
AK		DOPAZO, J., ET AL. Design Of primers for PCR amplification of highly variable genomes. CABIOS, 9, 1993, pgs. 123-125.			

Examiner Signature	<i>Andrew Kennedy</i>	Dat Consid red	12/4/03
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				Filing Date	June 7, 2001
				First Named Inventor	John SantaLucia, et al.
				Group Art Unit	
				Examiner Name	
Sheet	3	of	4	Attorney Docket Number	WSU 0152.788
<b>OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS</b>					
Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			
AK		KE ET AL. Influence of Neighboring Base Pairs on the Stability of Single Base Bulges and Base Pairs in a DNA Fragment, <i>Biochemistry</i> , 34, 1995, pgs. 4593-4600. ✓			
AK		KIERZEK, R., ET AL. Thermodynamics of Single Mismatches in RNA Duplexes. <i>Biochemistry</i> , 43, 1999, pgs. 14214-14223. ✓			
AK		LADBURY ET AL. Thermodynamics of Formation of a Three-Strand, DNA Three-Way Junction Complex, <i>Biochemistry</i> , 33, 1994, pgs. 6828-6833. ✓			
AK		LEONTIS ET AL. Stability and Structure of Three-Way DNA Junctions Containing Unpaired Nucleotides, <i>Nucleic Acids Res.</i> , 19, 1991, pgs. 759-766. ✓			
AK		MATTHEWS ET AL. Predicting Oligonucleotide Affinity to Nucleic Acid Targets, <i>RNA</i> , 5, 1999, pgs. 1458-1469. ✓			
AK		MATTHEWS ET AL. Expanded Sequence Dependence of Thermodynamic Parameters Improves Prediction of RNA Secondary Structure, <i>J. Mol. Biol.</i> , 288, 1999, pgs. 911-940. ✓			
AK		OWCZARZY, R ET AL. Predicting Sequence-Dependent Melting Stability of Short Duplex DNA Oligomers, <i>Biopoly</i> 44, 1997, pgs. 217-239. ✓			
AK		PESOLE G., ET AL. Gene Up: A program to Select Short PCR Primer Pairs that Occur in Multiple Members of Sequence Lists. <i>Biotechniques</i> , 25, 1998, pgs. 112-123 ✓			
AK		PEYRET, N., ET AL. Nearest-Neighbor Thermodynamics and NMB of DNA Sequences with Internal AA,CC,GG, and TT mismatches. <i>Biochemistry</i> , 38, 1999, pgs. 3468-3477. ✓			
AK		POLLAMEN, R., ET AL. Detection of Human Papillomavirus by non Isotopic in situ Hybridization in Condylomatous and CIN Lesions. <i>Journal of Clinical pathology</i> , 46, 1993, pgs. 936-939. ✓			

Examiner Signature	<i>Andrew Kandy</i>	Date Considered	12/4/03
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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 2 of 4

### Complete If Known

Application Number	09/876,549
Filing Date	June 7, 2001
First Named Inventor	John SantaLucia, et al.
Group Art Unit	
Examiner Name	
Attorney Docket Number	WSU 0152 1000P

### OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials <sup>*</sup>	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number, publisher, city and/or country where published.
AK		FEREA, T.L., ET AL. Systematic Changes in Gene Expression Patterns Following Adaptive Evolution in Yeast. Proc. Natl. Acad. Sci. U.S.A., 96, 1999, pgs. 9721-9726.
AK		FODOR, S.P.A., ET AL. Multiplexed Biochemical Assays with Biological Chips. Nature, 364, 1993, pgs. 555-556.
AK		FOTIN, A.V., ET AL. Parallel thermodynamic analysis of duplexes on oligodeoxyribonucleotide microchips. Nucleic Acids Res., 26, 1998, pgs. 1515-1521.
AK		FREIER, S.M., ET AL. Improved Free-energy Parameters for Predictions of RNA Duplex Stability. Proc. Natl. Acad. Sci. U.S.A., 83, 1986, pgs. 9373-9377.
AK		GALL, J.G. and Pardue M.L. Formation and Detection of RNA-DNA hybrid Molecules in Cytological Preparations. Proc. Natl. Acad. Sci. U.S.A., 63, 1969, pgs. 378-383.
AK		GRAY, D. Derivation of Nearest-Neighbor Properties from Data on Nucleic Acid Oligomers. I. Simple sets of Independent Sequences and the Influence of Absent Nearest Neighbors, Biopolymers, 42, 1997, pgs. 783-793.
AK		GRAY, D. Derivation of Nearest-Neighbor Properties from Data on Nucleic Acid Oligomers. II. Thermodynamic Parameters of DNA-RNA Hybrids and DNA, Biopolymers, 42, 1997, pgs. 795-810.
AK		HAAS, S., ET AL. Primer design for large scale sequencing. Nucleic Acids Res., 26, 1998, pgs. 3006-3012.
AK		HILLIER, L. and Green P. OSP: a computer program for choosing PCR and DNA sequencing primers. PCR Methods Appl, 1, 1991, pgs. 124-128.
AK		HYNDMAN, D., ET AL. Software to Determine Optimal Oligonucleotide Sequence Based on Hybridization Simulation Data. Biotechniques, 20, 1996, pgs. 1090-1097.
AK		KADRMAS et al. Relative stabilities of DNA three-way, four-way and five-way junctions (multi-helix junction loops): unpaired nucleotides can be stabilizing or destabilizing. Nucleic Acids Res., 23, 1995, pgs. 2112-2122.

Examiner  
Signature

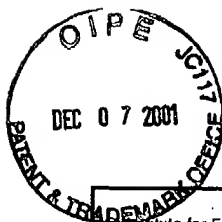
*Andrew Kennedy*

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Sheet	4	of	4	Attorney Docket Number	WSU 0152 PEP
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AK		PROUTSKI, V., and Holmes E.C. Primer Master: a new program for the design and analysis of PCR primers. CABIOS, 12, 1996, pgs. 253-255. ✓			
AK		RYCHLIK W. and Rhoads R.E. A computer program for choosing optimal oligonucleotides for filter hybridization, sequencing and in vitro amplification of DNA. Nucleic Acids Res., 17, 1989, pgs. 8543-8551. ✓			
AK		SAIKI R.K., ET AL. Primer-directed Enzymatic Amplification of DNA with a Thermostable DNA Polymerase. Science, 239, 1988, pgs. 487-494. ✓			
AK		SANTALUCIA J., JR., ET AL. Improved Nearest-Neighbor Parameters for Predicting DNA Duplex Stability. Biochemistry, 35, 1996, pgs. 3555-3562. ✓			
AK		SANTALUCIA J., JR., ET AL. Measuring the Thermodynamics of RNA Secondary Structure Formation, Biopoly, 44 1997, pgs. 309-319. ✓			
AK		SANTALUCIA J., JR. A Unified View of Polymer, Dumbbell, and Oligonucleotide DNA Nearest-Neighbor Thermodynamics. Proc. Natl. Acad. Sci. USA, 95, 1998, pgs. 1460-1465. ✓			
AK		XIA T., ET AL. Thermodynamic Parameters for and Expanded Nearest-Neighbor Model for Formation of RNA Duplexes with Watson-Crick Base Pairs, Biochemistry, 37, 1998 pgs. 14719-14735. ✓			
AK		WEBER ET AL. Shedding Light on the Dark and Weakly Fluorescent States of Green Fluorescent Proteins, PNAS 96, 1999, pgs. 6177-6182. ✓			
AK		ZIEBA ET AL. Differential Hydration of dA-dT Base Pairing and dA and dT Bulges in Deoxyoligonucleotides, Biochemistry, 30, 1991, pgs. 8018-8026. ✓			
AK		ZUCKER M. On Finding all Suboptimal Foldings of an RNA Molecule. Science, 244, 1989, pgs. 48-52. ✓			

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Examiner Signature	<i>Andrew Kennedy</i>	Date Considered	12/4/03
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AK		Peyret et al. A new program for the prediction of DNA hybridization thermodynamics. American Chemical Society. March 1999, abstract number BIOT-121. ①			
AK		Schutz et al. Spreadsheet software for the thermodynamic melting point prediction of oligonucleotide hybridization with and without mismatches. BioTechniques. December 1999, vol. 27, no. 6, pp. 1218-1224. ②			

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Examiner Signature	<i>Andrew Hundy</i>	Date Considered	12/4/03
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